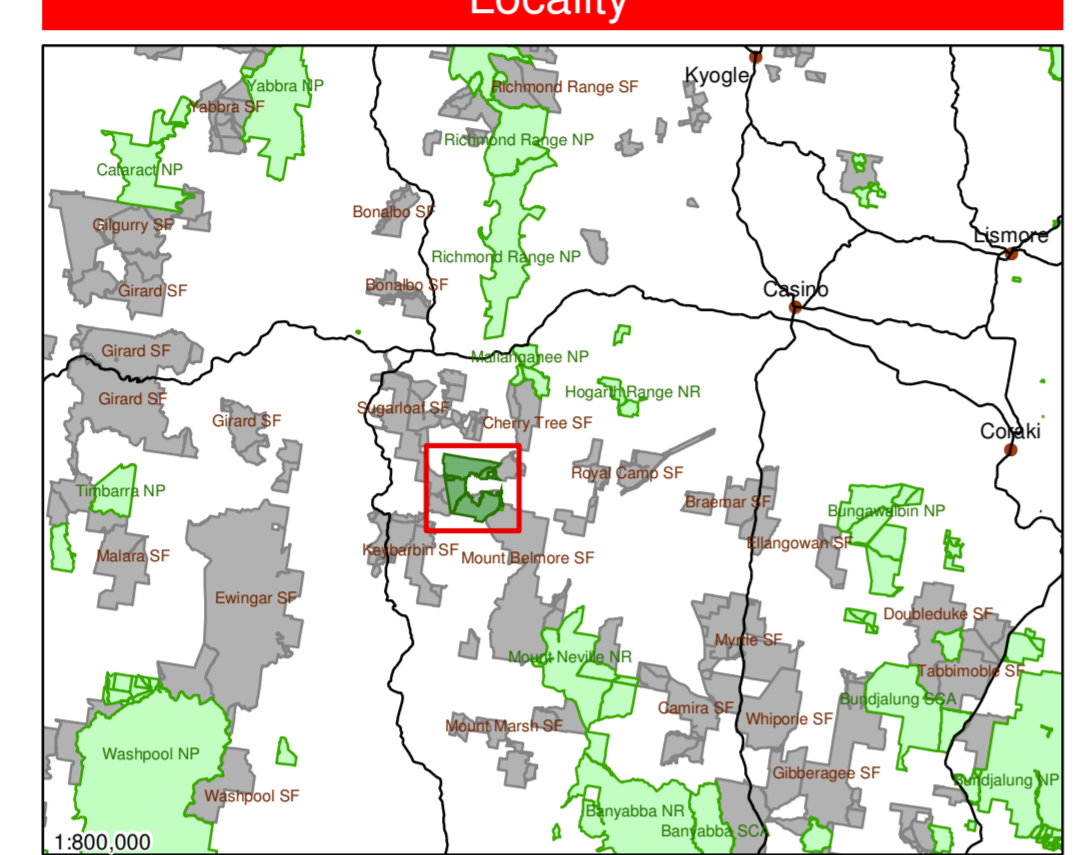
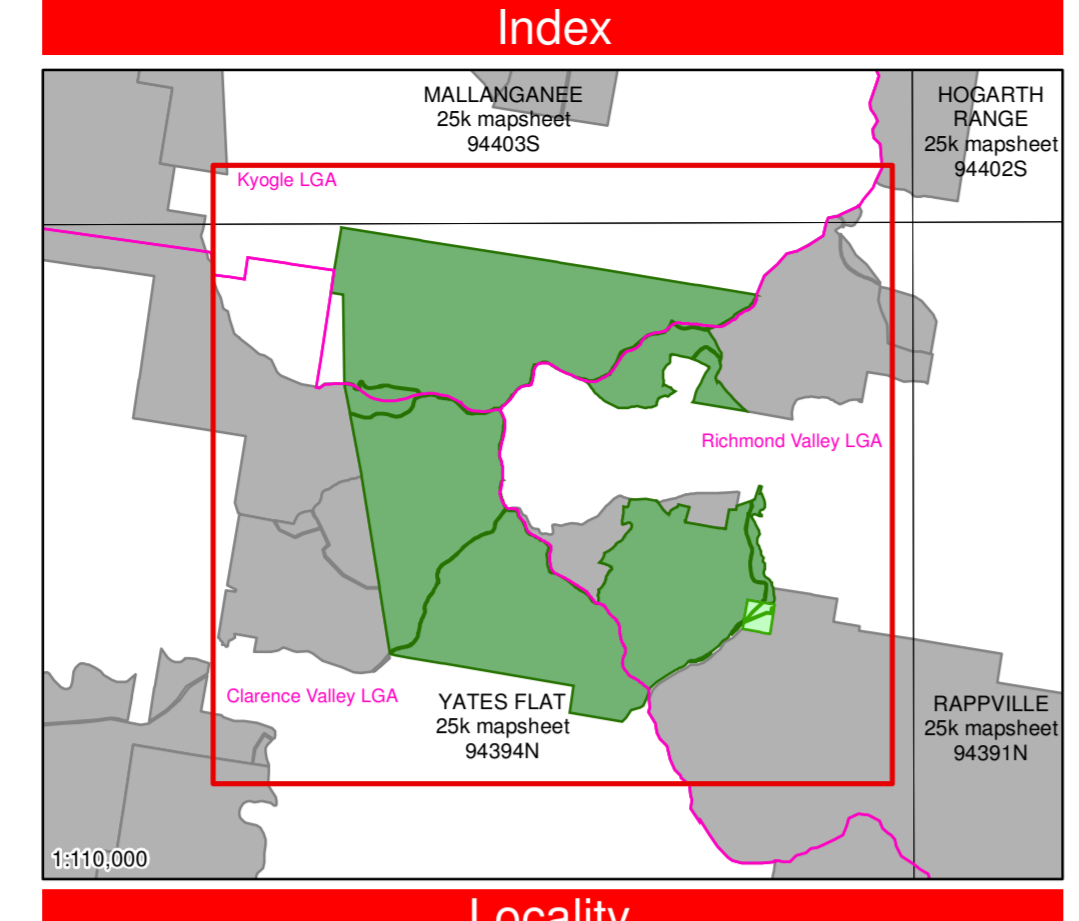


**North Coast Region
Mount Pikapene National Park
Fire Management Strategy (Type 2)
2006
Sheet 1 of 1**

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans. These data are not guaranteed to be free from error or omission. The NSW National Parks and Wildlife and its employees disclaim liability for any act done on the information in the data and any consequences of such acts or omissions. This document is copyright. Apart from any fair dealing for the purpose of study, research criticism or review, as permitted under the copyright Act, no part may be reproduced by any process without written permission. The NSW National Parks and Wildlife Service is part of the Department of Environment and Conservation. Published by the Department of Environment and Conservation (NSW), August 2006. Contact: NSW National Parks and Wildlife Service, NSW National Parks and Wildlife Service, North Coast Region, PO Box 561 Grafton NSW 2460. ISBN: 1 920887 38 5 DEC Number: 2006/480 Last Updated: 22/08/2006

Department of Environment and Conservation (NSW)
This strategy is a relevant Plan under Section 38 (4) and Section 44 (3) of Rural Fires Act 1997.

Endorsed by: _____ Date: / /
Director Northern, Parks & Wildlife Division



Contact Information

Agency	Position / Location	Phone
NPWS	Regional Duty Officer (24 hrs)	02 6641 1500
	Area Manager (Clarence North)	02 6641 1500
	Regional Office	0428 411 501 02 6641 1500 02 6643 5569 (fax)
Rural Fire Service	Duty Officer	0500 881 866
	Clarence Valley Fire Control Centre Richmond Valley Fire Control Centre	02 6644 5135 02 6663 7221
NSW Fire Brigade	Emergency	000
	Casino Grafton	02 6662 6051 02 6643 3491
SES	Emergency	000
	Grafton Casino	02 6643 3348 02 6662 1889
Police	Police Assistance Line	131444
	Grafton Casino	02 6642 0222 02 6662 0099
Ambulance	Emergency	000
	All other bookings	131233
Hospital	Grafton Base Hospital	02 6640 2232
	Lismore Base Hospital Casino Memorial Hospital	02 6621 8000 02 6662 2111
Agriculture NSW	Grafton	02 6640 1600
	Casino	02 6662 2288
Forests NSW	24 hour fire calls	02 6655 6950
	NE Region - Coff's Hbr Casino Management Area	02 6652 0111 02 6662 0900
Council	Clarence Valley	02 6643 3886
	Richmond Valley Tenterfield	02 6660 0300 02 6736 1744
Local Aboriginal Land Council	Jumbullum (Tabulam)	02 6666 1337
	Casino Boolangie (Casino) Jana-Ngalee (Baryulgil)	02 6662 1308 02 6647 2119

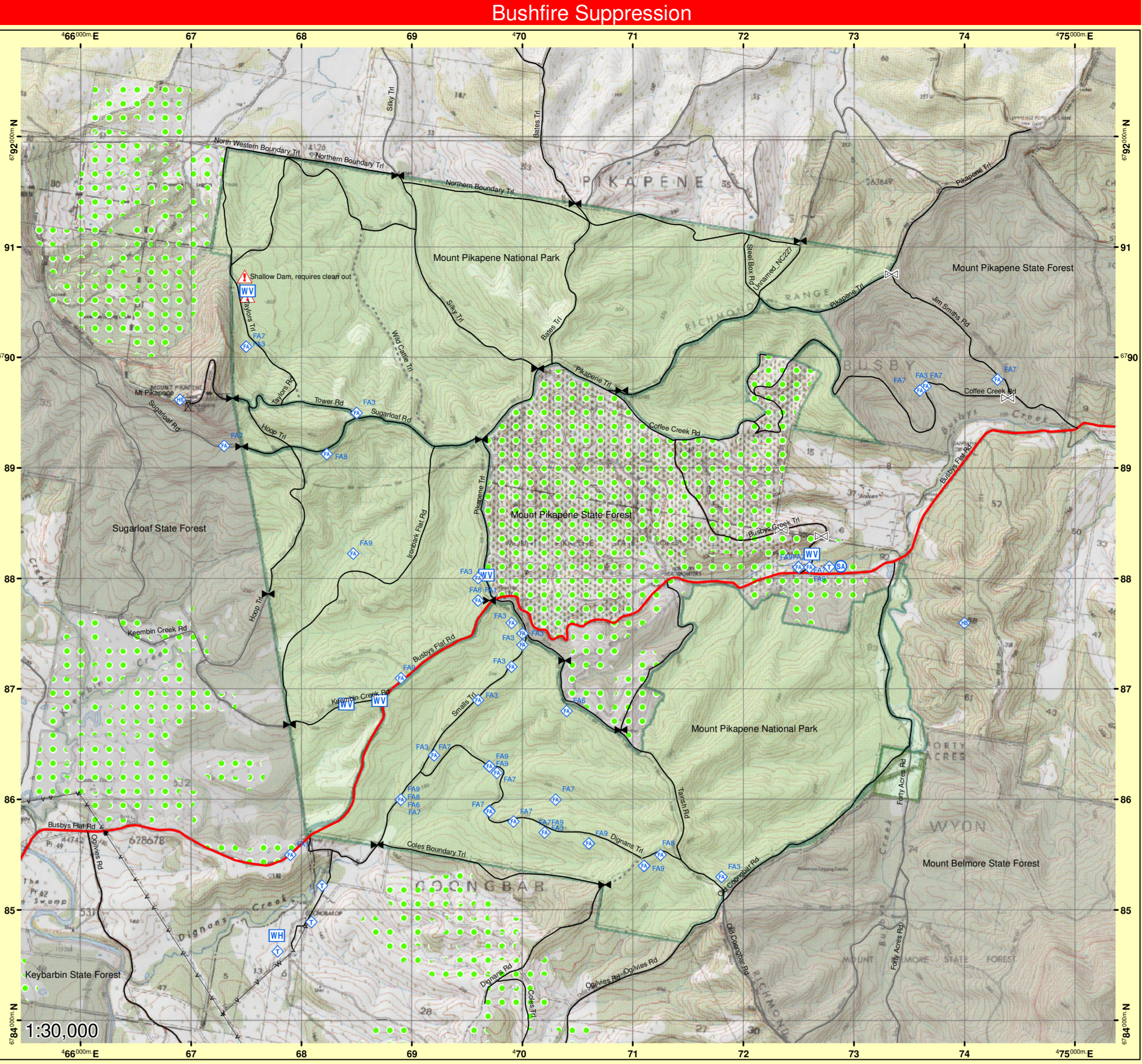
Strategy Information

Fire Season Information

- Wildfires: Have been known to start as early as late August, but usually the potential for a large fire event is greatest between October and December. This period may extend into January in more severe years.
- Prescribed Burning (NPWS Fire Management Manual 4.7): General season is Autumn to late Winter. Burning is possible in early Spring but not desirable on a regular basis from an ecological or tourism point of view.

Suppression Strategies

Current FDR	Forecast FDR	Strategy
Low - Mod	Low - Mod	<ul style="list-style-type: none"> Undertake direct, parallel or indirect attack along existing containment lines. Where practicable consider maximising the fire area in accordance with the requirements of any proposed prescribed burns.
Low - Mod	=> High	<ul style="list-style-type: none"> In order to minimise the fire area and secure the flanks as soon as possible, undertake direct, parallel or indirect attack along the closest containment lines. Pay particular attention to the flank on the next predicted down wind side.
High	All	<ul style="list-style-type: none"> Undertake indirect attack along existing or newly constructed containment lines. Secure and deepen containment lines along the next predicted downwind side of the fire. If applicable consider broader than normal containment strategies to avoid wasted effort and high risk of failure.
All	All	<ul style="list-style-type: none"> Ensure there is sufficient time to secure containment lines prior to the fire impacting upon them; otherwise fall back to the next potential line.



Bushfire Suppression Legend

Contour Intervals 10 metres

— Primary (Cat 1)	NPWS Estate	Gate - NPWS	Water Point Helicopter
— Secondary (Cat 9)	SF NSW Estate	Gate - non NPWS	Caution
..... Dormant	Plantation	Refuge Area	Vantage Point
— Not Classified	Threatened Flora	Staging Area	Fire Tower
— Powerlines-NC	Threatened Fauna	Water Point Vehicle	Threatened Property
			European Cultural Sites

Assume all gates locked

Datum: AGD66
Projection: UTM
Grid: AMG Zone 56
Noted scales are true when this map is printed on A1 size paper

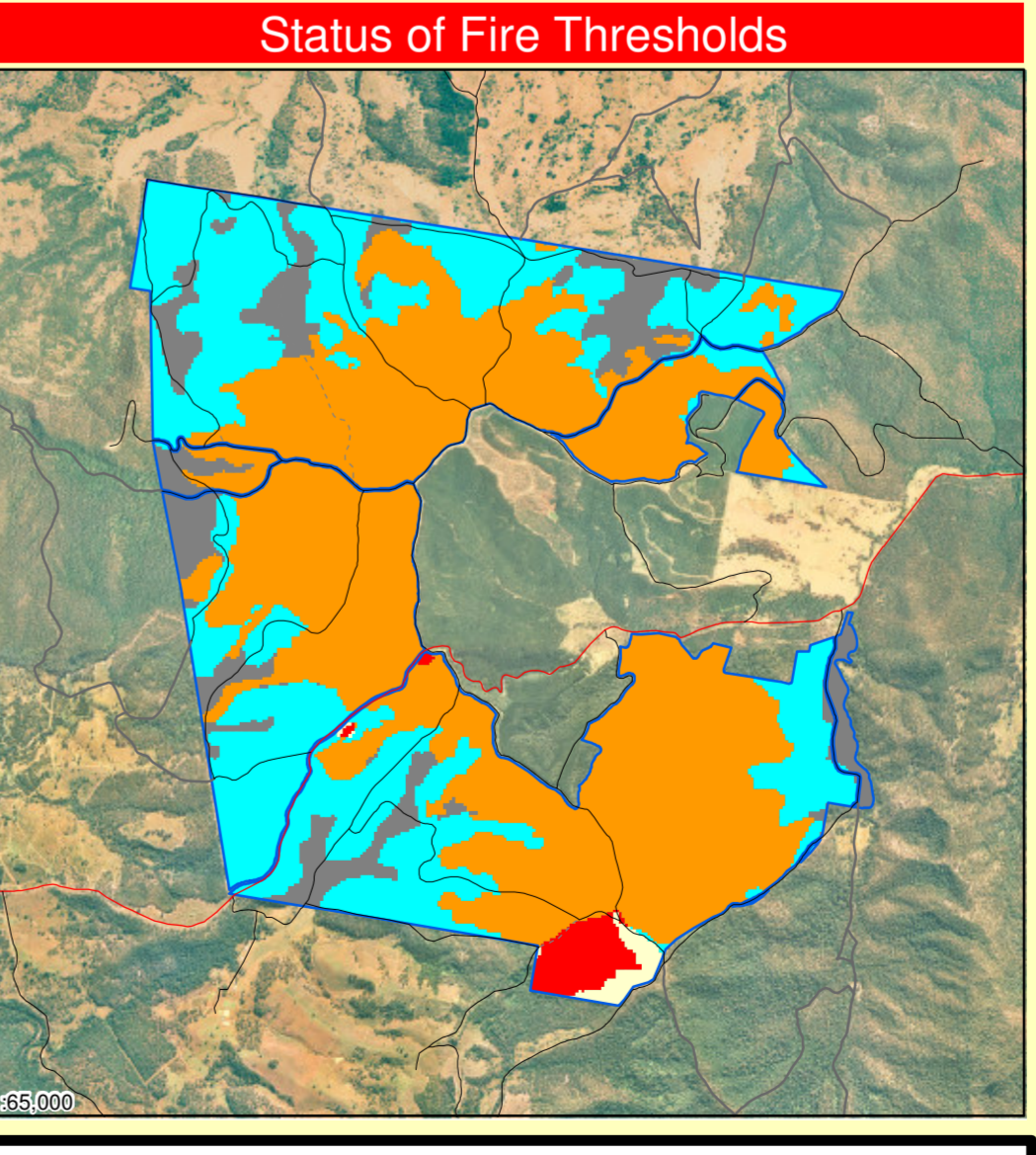
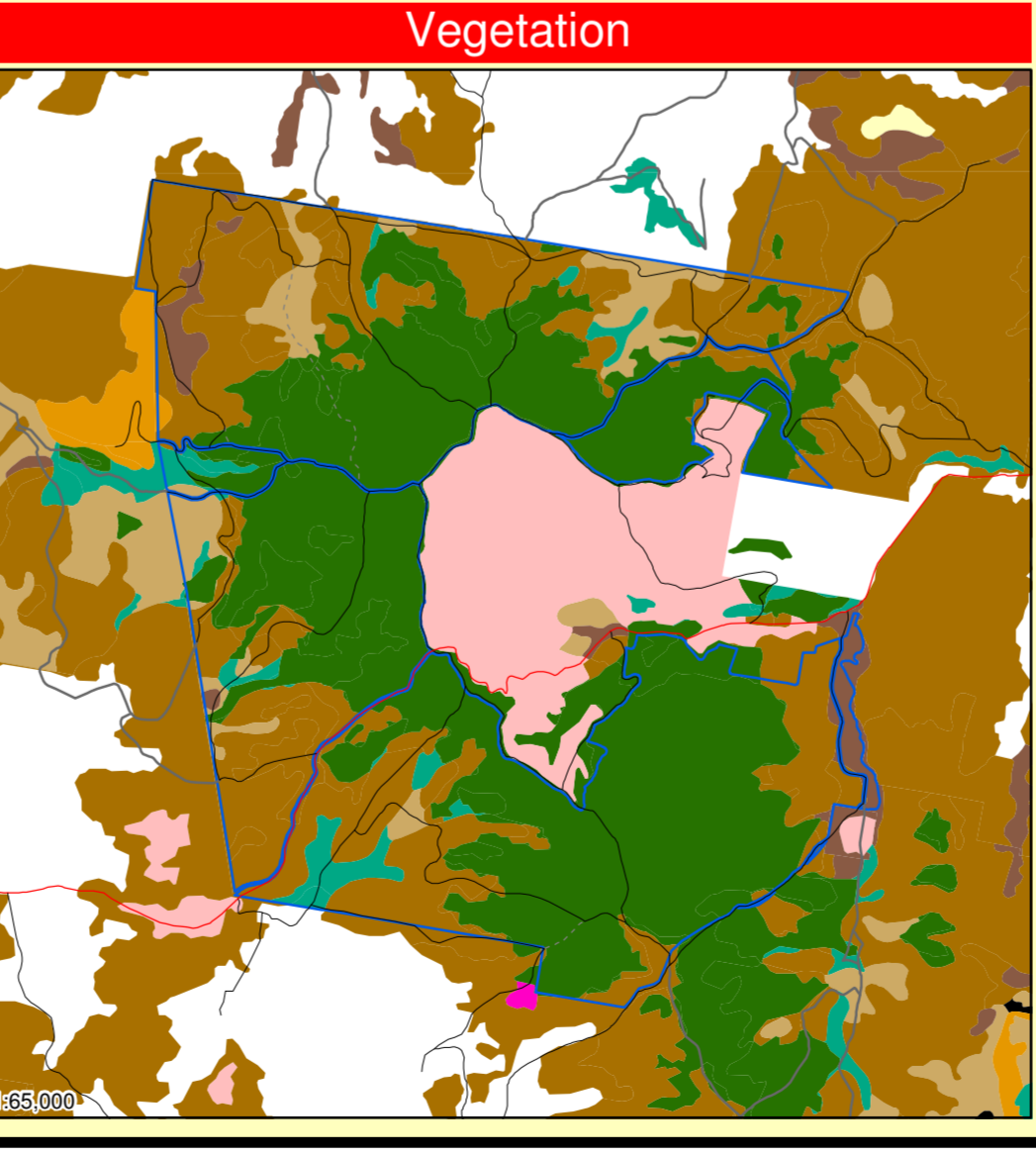
Operational Guidelines

Resource	Guidelines
Aboriginal Cultural Heritage Site Management (NPWS FMM 4.11)	<ul style="list-style-type: none"> Brief all personnel involved in containment line construction &/or vehicle based fire suppression operations, on site locations and the required management strategies appropriate to the site type. Ensure close liaison with the relevant Sites Officer in order to check for &/or identify new sites.
Historic Heritage Management (NPWS FMM 4.10)	<ul style="list-style-type: none"> Brief all personnel involved in containment line construction &/or vehicle based fire suppression operations, on site locations and the required management strategies appropriate to the site type.
Threatened Fauna Management (NPWS FMM 4.12 & 5.2)	<ul style="list-style-type: none"> FA1 - Avoid frequent fire (<10 year interval). Use mosaic burn pattern. Protect ground habitat (logs etc). FA3 - Exclude fire from habitat (wetland, rainforest or moist forest). Avoid use of earthmoving machinery, chemicals. FA6 - Protect hollow-bearing trees. Avoid frequent fire (<10 year interval). FA7 - Protect hollow-bearing trees. FA8 - Avoid frequent fire (<10 year interval). Use mosaic burn pattern. FA9 - Protect known habitat (riverine & bat camps) from disturbance. Avoid use of earthmoving machinery, chemicals.
Threatened Flora Management (NPWS FMM 4.12)	<ul style="list-style-type: none"> FL1 - Avoid inter-fire intervals of <10 years in locations where these species are known to occur. Avoid the use of earth moving machinery in locations where these species are known to occur. Avoid the use of retardant in locations where these species are known to occur. FL2 - As far as possible, exclude all fire from locations where these species are known to occur. Avoid the use of earth moving machinery in locations where these species are known to occur. Avoid the use of retardant in locations where these species are known to occur.
Threatened Property	<p>All property owners with assets at possible risk from a wildfire event will be:</p> <ul style="list-style-type: none"> Kept informed regarding the progress of the fire; and Asked for an assessment of their current level of asset protection preparedness.
General	Guidelines
Aerial Water Bombing (NPWS FMM 4.4 / NSW Fire Agencies Aviation SOPs 02 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spotovers. The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances. Where practicable foam should be used to increase the effectiveness of the water. Ground crews must be alerted to water bombing operations.
Aerial Ignition (NPWS FMM 4.2.20 & 4.4 / NSW Fire Agencies Aviation SOPs 02-4 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> Aerial ignition may be used during fuel reduction and backburning operations where practicable, but only with the prior consent of the senior NPWS officer. May be ineffective in Heathlands with poorly developed surface fuel layers.
Backburning (NPWS FMM 4.8)	<ul style="list-style-type: none"> Temperature and humidity trends must be monitored carefully to determine the safest times to implement backburns. Generally, when the FDI is Very High or greater, backburning should commence when the humidity begins to rise in the late afternoon or early evening. With a lower FDI backburning may be safely undertaken during the day. Where practicable, clear a 1 m radius around dead and fibrous barked trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburn ignition. Brief all involved personnel on the location of cultural sites and threatened species prior to backburning, and adhere to the above guidelines.
Command & Control (NPWS FMM 4.2)	<ul style="list-style-type: none"> The first combatant agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly. On the arrival of other combatant agencies, the initial incident controller will consult with regard to the ongoing command, control and incident management team requirements as per the relevant BFMC Plan of Operations.
Containment Lines (NPWS FMM 2.2 & 3.9)	<ul style="list-style-type: none"> Construction of new containment lines should be avoided, except where they can be built by hand with minimal erosion potential. Only existing or previous trails or containment line routes will be used. Roads and trails to be used as containment lines but requiring works should be prioritised in consultation with relevant IMT and Fire Ground staff. All containment lines not required for other purposes should be closed immediately at the cessation of the incident. Where practicable, erosion control works should be incorporated into the containment line construction phase. All personnel involved in containment line construction should be briefed on both natural and cultural heritage sites in the location.
Earthmoving Equipment (NPWS FMM 4.2.20 & 4.3)	<ul style="list-style-type: none"> Earthmoving equipment may only be used with the prior consent of the senior NPWS officer, and then only if the probability of its success is high. Earthmoving equipment must be washed down prior to it entering NPWS estate. As far as possible, restrict its use to previously used containment lines. Earthmoving equipment must be always guided and supervised by an experienced NPWS officer, and accompanied by a support vehicle. When engaged in direct or parallel attack this vehicle must be a firefighting vehicle. Containment lines constructed by earthmoving equipment should be at least 50 m from drainage lines in order to avoid erosion problems. Observe the Threatened Species and Cultural Heritage Operational Guidelines. Proposed containment lines to be constructed with earthmoving equipment should be surveyed to identify unknown cultural heritage sites.
Fire Advantage Recording	<ul style="list-style-type: none"> All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.
Fire Suppression Chemicals (NPWS FMM 4.2.20 & 4.9)	<ul style="list-style-type: none"> Wetting and foaming agents (surfactants) are permitted for use in wildfire suppression. The use of fire retardant is only permitted with the prior consent of the senior NPWS officer, and should be avoided where reasonable alternatives are available. Exclude the use of surfactants and retardants within 50 m of rainforest, watercourses, dams and swamps. Areas where fire suppression chemicals are used must be mapped and the used product's name recorded. Observe the Threatened Species Operational Guidelines.
Rehabilitation (NPWS FMM 5.1)	<ul style="list-style-type: none"> Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management (NPWS FMM 3.4)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. If smoke becomes a hazard on local roads or highways, the police and relevant media must be notified.
Visitor Management (NPWS FMM 3.6 & 4.13)	<ul style="list-style-type: none"> The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.

Risk Management Information

Fire Management Zones

- Asset Protection Zones:** The objective of APZs is the protection of human life and property. This will have precedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.
- Strategic Fire Advantage Zones:** The objective of SFAZs is to reduce fire intensity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take precedence where practical.
- Heritage Management Zones:** The objective of HMZs is to conserve biodiversity and protect cultural heritage. Manage fire consistent with fire thresholds.



Fire Thresholds

Overburnt	Fire thresholds have been exceeded. - Protect from fire as far as possible.
Vulnerable	The area will be Overburnt if it burns this year. - Protect from fire as far as possible.
Recently Burnt	Time since fire is less than the optimum interval, but before that it was within threshold. - Avoid fires if possible.
Within Threshold	Fire history is within the threshold for vegetation in this area. - A burn is neither required nor should one necessarily be avoided.
Almost Underburnt	The area is close to its threshold and may become underburnt with the absence of fire. - A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.
Underburnt	Fire frequency is below fire thresholds in the area. - A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.
Unknown	Insufficient data to determine fire threshold.

NB. Fire thresholds are defined for vegetation communities to conserve biodiversity